

Translation

PATENT COOPERATION TREATY

PCT/DE2003/004190

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P02106WO.1P	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/DE2003/004190	International filing date (day/month/year) 19 December 2003 (19.12.2003)	Priority date (day/month/year) 08 January 2003 (08.01.2003)
International Patent Classification (IPC) or national classification and IPC H04L 9/32		
Applicant DEUTSCHE TELEKOM AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 28 July 2004 (28.07.2004)	Date of completion of this report 03 December 2004 (03.12.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/004190

I. Basis of the report

1. With regard to the elements of the international application:*

the international application as originally filed
 the description:

pages _____ 1-13 _____, as originally filed
 pages _____ _____, filed with the demand
 pages _____ _____, filed with the letter of _____

the claims:

pages _____ _____, as originally filed
 pages _____ _____, as amended (together with any statement under Article 19
 pages _____ _____, filed with the demand

the drawings:

pages _____ 1/1 _____, as originally filed
 pages _____ _____, filed with the demand

the sequence listing part of the description:

pages _____ _____, as originally filed
 pages _____ _____, filed with the demand
 pages _____ _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos. _____ 9-10 _____
 the drawings, sheets/fig _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 03/04190

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 8	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 8	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: DE 198 45 199 A (MAZ MIKROELEKTRONIK ANWENDUNGS), 6 April 2000 (2000-04-06)

D2: US 2002/169970 A1 (CANDELORE BRANT L), 14 November 2002 (2002-11-14)

2. The subject matter of the application relates to a process (claim 1) and system (claim 7) for providing a time stamp by means of a tamper-proof time signal in a telecommunications network, as well as the use (claim 5) of the process when transmitting data between network subscribers.

3. Prior art:

Document D1 constitutes the closest prior art and discloses a process according to the preamble of claim 1, in which an officially recognised time signal is received and encrypted by a mobile network operator and transmitted to network subscribers and decrypted over the mobile telecommunications network.

4. Novelty:

The subject matter of independent claims 1 and 7 therefore differs from the known process in that:

- encryption and decryption are carried out with the same key;
- synchronous clock systems are provided at the central system and at the network subscribers and generate a key that changes synchronously in time.

The subject matter of claim 1 (and of claim 7) is therefore novel (PCT Article 33(2)).

5. Inventive step:

The present invention can therefore be considered to address the problem of securing time signal encryption against tampering.

The solution to this problem, as proposed in claims 1 and 7 of the present application, involves an inventive step (PCT Article 33(3)) for the following reasons:

In D1, the time signal is encrypted at the mobile network operator, rather than at the central system; the officially recognised time signal can thus be tampered with between the central system and the mobile network. In addition, encryption is based in D1 on network operator technology, and no temporal alteration of the symmetrical key by synchronous clock systems is proposed.

D2 describes a system similar to that in D1 for a "content players" network. Time signal encryption is not carried out by means of a symmetrical key variable in time.

Claims 2-6 and 8 are dependent on claim 1 or 7 and therefore likewise meet the PCT novelty and inventive step requirements.

6. Observations:

The expression "in particular" used in claims 1 and 7 leaves the reader uncertain about the presence of the technical feature in question within the scope of protection of claims 1 and 7.